

Notice of Allowability

Application No.

10/790,763

Examiner

James J. Leybourne

Applicant(s)

MORIYAMA ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE received March 12, 2007.
2. ☒ The allowed claim(s) is/are 2-4, 6, 11-13, 16-18, 20-22 and 26-30.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>3/12/2007</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. This office action is in response to a request for Continued Examination received March 12, 2007 to allow consideration of new IDS. The references in the IDS have been reviewed and do not present any prior art that is applicable against the allowed claims.
2. Claims 2, 4, 6, 20, 21, 22, 26 and 30 were amended and claims 1, 5, 7-10, 14, 15, 19 and 23-25 were cancelled in a prior office action. Claims 2-4, 6, 11-13, 16-18, 20-22 and 26-30 are pending.

Allowable Subject Matter

3. Claims 2-4, 6, 11-13, 16-18, 20-22 and 26-30 are allowed for the reasons cited in the previous office action. The reasons are repeated below.
4. Regarding independent claims 2, 4, 6, 20, 21, 22 and 30, the prior art fails to disclose or make obvious a particle beam therapy system comprising:
 - a first beam transport system connected to a charged particle beam generator
 - a plurality of second beam transport systems corresponding to a plurality of treatment rooms,
 - a control information forming unit which controls the elements in the second beam transport system, by using at least treatment room

information representing the selected treatment room and treatment plan information specified depending on patient identification information;

- a plurality of detectors that provide signals representing the status of the elements;
- an information confirming unit that confirms the element status is matched with the control, command information and outputting an emission authorization signal after confirmation

wherein the control information forming unit provides control command information for only those elements associated with the selected treatment room and, when the information confirming unit confirms that the selected status information is matched with the control data included in the control command information, it sends an emission authorization signal.

5. Claims 3, 11 and 16 are allowed by virtue of their dependency on claim 2.
6. Claims 12 and 17 are allowed by virtue of their dependency on claim 4.
7. Claims 13 and 18 are allowed by virtue of their dependency on claim 6.
8. Claims 26 and 27 are allowed by virtue of their dependency on claim 20.
9. Claims 28 and 29 are allowed by virtue of their dependency on claim 22.
10. Regarding claim 30, the prior art fails to disclose or make obvious A particle beam irradiating method for irradiating a charged particle beam emitted from a

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charged particle beam generator to a patient in a selected one of a plurality of treatment rooms by an irradiation unit in the method comprising the steps of

- forming control command information for one of element groups disposed in a plurality of beam paths, the one of said element groups being disposed in the beam path extended into the selected treatment room by using at least treatment room information representing the selected treatment room and treatment plan information specified depending on patient identification information ; and
- selecting, from among element information including status information representing respective status of said element groups, the status information of the element group in the beam path extended into the selected treatment room, and
- confirming that the selected status information is matched with said control command information,

said formation of the control command information being effected for the selected treatment room, but not for the other treatment rooms

said selection of the status information being effected by receiving the element information for all of said first element groups and then excluding the status information . with no control data

said confirmation being effected by confirming that the selected status information is matched with the control data; and

- outputting an emission authorization signal after making said confirmation.

The main feature that separates the apparatus and method apart from prior art is combining command information based on the selected patient room and patient treatment plan with status information about the beam control for the selected patient room and confirming that there is a match before issuing an emission authorization signal.

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Leybourne whose telephone number is 571 262-2478. The examiner can normally be reached on M_F 10:00AM - 6:00 PM.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

April 6, 2007

JJL


ROBERT KIM
SUPERVISORY PATENT EXAMINER